

Cell and Tissue Research

Continuation of Zeitschrift für Zellforschung
und mikroskopische Anatomie

Vol. 185 · 1977

Edited by

W. Bargmann, Kiel
D. S. Farner, Seattle
B. Lofts, Hong Kong
A. Oksche, Giessen
B. Scharrer, New York

In Cooperation with

A. Björklund, Lund
R. A. Cloney, Seattle
G. v. Ehrenstein, Göttingen
J. Flament-Durand, Bruxelles
G. Goldspink, Hull
T. Hökfelt, Stockholm
D. Szöllösi, Jouy-en-Josas
L. Vollrath, Mainz



Springer International

Cell and Tissue Research

This journal was founded in 1924 as the *Zeitschrift für Zellen- und Gewebelehre*, from Vol. 2 (1925) it was published with the subtitle: Continuation of the Schultze-Waldeyer-Hertwig Archiv für mikroskopische Anatomie. *Zeitschrift für Zellforschung und mikroskopische Anatomie* (Vols. 1–20) (1934) as: *Zeitschrift für wissenschaftliche Biologie* (Abteilung B) edited by R. Goldschmidt, W. von Möllendorff, H. Bauer, J. Seiler. Vols. 2–28 (1938) edited by R. Goldschmidt and W. von Möllendorff. Vols. 29–33 (1944) as: *Zeitschrift für Zellforschung und mikroskopische Anatomie*, Abteilung A, Allgemeine Zellforschung und mikroskopische Anatomie, edited by W. von Möllendorff and J. Seiler, from Vol. 34 without the subtitle, Abteilung A, Allgemeine Zellforschung und mikroskopische Anatomie. From Vol. 36 (1951) edited by W. Bargmann, J. Seiler; from Vol. 53 (1960) edited by W. Bargmann, B. Scharer, J. Seiler; from Vol. 83 (1967) edited by W. Bargmann, D.S. Farner, A. Oksche, B. Scharer, J. Seiler; from Vol. 125 (1972) edited by W. Bargmann, D.S. Farner, F. Knowles, A. Oksche, B. Scharer. Beginning with Vol. 125 (1972) with the subtitle Cell and Tissue Research and beginning with Vol. 148 (1974) under the title Cell and Tissue Research and the subtitle Continuation of *Zeitschrift für Zellforschung und mikroskopische Anatomie*. Beginning with Vol. 164 (1975) edited by W. Bargmann, D.S. Farner, B. Lofth, A. Oksche, B. Scharer. Beginning with Vol. 166 (1976) in cooperation with: A. Björklund, R.A. Cloney, G.v. Ehrenstein, J. Flament-Durand, G. Goldspink, T. Hökfelt, D. Szöllösi, L. Vollrath.

Published: Vols. 34–35 (1948–1950) Springer, Wien, from Vol. 36 Springer, Berlin.

The exclusive copyright for all languages and countries, including the right, for photomechanical and any other reproductions, also in microform, is transferred to the publisher.

The use of registered names, trademarks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

Springer-Verlag, Berlin-Heidelberg-New York

Printers: Universitätsdruckerei H. Stürtz AG, Würzburg

Printed in Germany — © by Springer-Verlag Berlin-Heidelberg 1977

Contents of Volume 185, 1977

No. 1 issued on November 30, 1977

H. J. van der Rhee, C. P. M. de Winter, W. Th. Daems: Fine Structure and Peroxidatic Activity of Rat Blood Monocytes	1
Chr. G. Reed, R. A. Cloney: Brachiopod Tentacles: Ultrastructure and Functional Significance of the Connective Tissue and Myoepithelial Cells in <i>Terebratalia</i>	17
E. Weihe, W. Hartschuh, P. Kalmbach, P. Antony, J. Greiner, W. G. Forssmann: The Effects of Glycerol Treatment on the Isolated Rat Heart	43
M. B. Ray, V. J. Desmet, W. Gepts: Alpha-1-Antitrypsin Immunoreactivity in Islet Cells of Adult Human Pancreas	63
O. Kai, T. Fujioka, M. Yasuda: Intramitochondrial Bodies in Bovine Adrenocortical Cells	69
S. M. Morris, J. T. Albright: Cytochemical Study of the Lamellar Bodies in the Swimbladder of the Toadfish <i>Opsanus tau</i> L.	77
J. A. Chandler, F. Sinowatz, B. G. Timms, C. G. Pierrepoint: The Subcellular Distribution of Zinc in Dog Prostate Studied by X-Ray Microanalysis	89
P. N. Dilly: Further Observations of Transport within Paddle Cilia	105
C. Somló, W. de Souza, R. D. Machado, A. Hassón-Voloch: Biochemical and Cytochemical Localization of ATPases on the Membranes of the Electrocyte of <i>Electrophorus electricus</i>	115
T. F. C. Batten, J. N. Ball: Quantitative Ultrastructural Evidence of Alterations in Prolactin Secretion Related to External Salinity in a Teleost Fish (<i>Poecilia latipinna</i>)	129

No. 2 issued on December 13, 1977

H. Jensen, A. Tjønneland: Ultrastructure of the Heart Muscle Cells of the Cuttlefish <i>Rossia macrosoma</i> (Delle Chiaje) (Mollusca: Cephalopoda)	147
P. C. Combes, A. Privat, B. Pessac, G. Calothy: Differentiation of Chick Embryo Neuroretina Cells in Monolayer Cultures. An Ultrastructural Study. I. Seven-Day Retina	159
Y. Takei: The Role of the Subfornical Organ in Drinking Induced by Angiotensin in the Japanese Quail, <i>Coturnix coturnix japonica</i>	175
R. M. Rizki, T. M. Rizki, Ch. A. Andrews: Modification of <i>Drosophila</i> Cell Surfaces by Concanavalin A	183
C. D. Tweedle: Ultrastructure of Lateral Line Organs in Aneurogenic Amphibian Larvae (<i>Ambystoma</i>)	191

H. J. Romijn, M. T. Mud, P. S. Wolters: A Pharmacological and Autoradiographic Study on the Ultrastructural Localization of Indoleamine Synthesis in the Rabbit Pineal Gland 19

R. Bock, I. Jurna: Ipsilateral Diminution of CRF-Granules after Unilateral Hypothalamic Lesions 21

E. I. Grodums: Ultrastructural Changes in the Mitochondria of Brown Adipose Cells during the Hibernation Cycle of *Citellus lateralis* 23

D. Baetens, J. De Mey, W. Gepts: Immunohistochemical and Ultrastructural Identification of the Pancreatic Polypeptide-Producing Cell (PP-Cell) in the Human Pancreas 23

U. Bassemir: Ultrastructural Differentiations in the Developing Follicle Cortex of *Locusta migratoria*, with Special Reference to Vitelline Membrane Formation 24

I. R. Duce, P. Keen: An Ultrastructural Classification of the Neuronal Cell Bodies of the Rat Dorsal Root Ganglion Using Zinc Iodide-Osmium Impregnation 26

Short Communications

B. Tillmann, I. Pietzsch-Rohrschneider, H. L. Huenges: The Human Vocal Cord Surface 27

M. Nistal, R. Paniagua: Variable Patterns of Actin Filaments in Mammalian Skeletal Muscle 28

No. 3 issued on December 19, 1977

A. Björklund, U. Stenevi: Reformation of the Severed Septohippocampal Cholinergic Pathway in the Adult Rat by Transplanted Septal Neurons 28

C. J. Gravis: Testicular Involution Following Optic Enucleation: The Leydig Cell 30

D. S. Linthicum, E. A. Stein, D. H. Marks, E. L. Cooper: Electron-Microscopic Observations of Normal Coelomocytes from the Earthworm, *Lumbricus terrestris* 31

K. Noda, T. Nomaguchi, Y. Tanaka: Ultrastructural Study on Hepatic Melanin in *Xenopus laevis* 33

C. Schubert, U. Welsch, H. Goos: Histological, Immuno- and Enzyme-Histochemical Investigations on the Adenohypophysis of the Urodeles, *Mertensiella caucasica* and *Triturus cristatus* and the Caecilian, *Chthonerpeton indistinctum* 33

H. de Vries-Schoumacker: Fluorescence and Ultrastructural Localization of Aminergic Neurons in the Nerve Cord of *Eisenia foetida* (Annelida — Oligochaeta) 35

R. Deanesly: Germ Cell Proliferations in the Fetal Horse Ovary 36

S. J. Publicover, C. J. Duncan, J. L. Smith: Ultrastructural Changes in Muscle Mitochondria in situ, Including the Apparent Development of Internal Septa, Associated with the Uptake and Release of Calcium 37

S. J. Jones, A. Boyde: Some Morphological Observations on Osteoclasts	387
M. H. Snow: The Effects of Aging on Satellite Cells in Skeletal Muscles of Mice and Rats	399
T. F. C. Batten, J. N. Ball: Ultrastructure of the Neurohypophysis of the Teleost <i>Poecilia latipinna</i> in Relation to Neural Control of the Adenohypophysial Cells	409

No. 4 issued on December 28, 1977

J. H. W. M. Rombout: Enteroendocrine Cells in the Digestive Tract of <i>Barbus conchoni</i> (Teleostei, Cyprinidae)	435
V. Verma, M. Pécot-Dechavassine: A Comparative Study of Physiological and Structural Changes at the Myoneural Junction in Two Species of Frog after Transection of the Motor Nerve	451
J. Alumets, F. Sundler, R. Håkanson: Distribution, Ontogeny and Ultrastructure of Somatostatin Immunoreactive Cells in the Pancreas and Gut	465
G. C. Unnithan, K. K. Nair: Ultrastructure of Juvenile Hormone-Induced Degenerating Flight Muscles in a Bark Beetle, <i>Ips paraconfusus</i>	481
W. F. Colmers: Neuronal and Synaptic Organization in the Gravity Receptor System of the Statocyst of <i>Octopus vulgaris</i>	491
J. Hess, J. H. B. Diederer, H. G. B. Vullings: Influence of Changes in Composition of the Cerebrospinal Fluid on the Secretory Activity of the Subcommissural Organ in <i>Rana esculenta</i> . A Quantitative Histochemical and Autoradiographic Study by Means of Scanning Cytophotometry	505
S. Stowe: The Retina-Lamina Projection in the Crab <i>Leptograpsus variegatus</i>	515
U. Welsch, W. Buchheim: Freeze Fracture Studies on the Annelid Septate Junction	527
F. B. P. Wooding, G. Morgan, H. Craig: "Sunbursts" and "Christiesomes": Cellular Fragments in Normal Cow and Goat Milk	535
H. Eichelberg: Fine Structure of the Drum Muscles of the Piranha (Serrasalminae, Characidae)	547
J. J. Nordmann: Ultrastructural Appearance of Neurosecretory Granules in the Sinus Gland of the Crab after Different Fixation Procedures	557

Indexed in Current Contents

Author-Index of Volume 185, 1977

Albright, J.T. 77
 Alumets, J. 465
 Andrews, Ch.A. 183
 Antony, P. 43

Baetens, D. 239
 Ball, J.N. 129, 409
 Bassemir, U. 247
 Batten, T.F.C. 129, 409
 Björklund, A. 289
 Bock, R. 215
 Boyde, A. 387
 Buchheim, W. 527

Calothy, G. 159
 Chandler, J.A. 89
 Cloney, R.A. 17
 Colmers, W.F. 491
 Combes, P.C. 159
 Cooper, E.L. 315
 Craig, H. 535

Daems, W.Th. 1
 Deanesly, R. 361
 De Mey, J. 239
 Desmet, V.J. 63
 Diederer, J.H.B. 505
 Dilly, P.N. 105
 Duce, I.R. 263
 Duncan, C.J. 373

Eichelberg, H. 547

Forssmann, W.G. 43
 Fujioka, T. 69

Gepts, W. 63, 239
 Goos, H. 339
 Gravis, C.J. 303

Greiner, J. 43
 Grodums, E.I. 231

Håkanson, R. 465
 Hartschuh, W. 43
 Hassón-Voloch, A. 115
 Hess, J. 505
 Huenges, H.L. 279

Jensen, H. 147
 Jones, S.J. 387
 Jurna, I. 215

Kai, O. 69
 Kalmbach, P. 43
 Keen, P. 263

Linthicum, D.S. 315

Machado, R.D. 115
 Marks, D.H. 315
 Morgan, G. 535
 Morris, S.M. 77
 Mud, M.T. 199

Nair, K.K. 481
 Nistal, M. 285
 Noda, K. 331
 Nomaguchi, T. 331
 Nordmann, J.J. 557

Paniagua, R. 285
 Pécot-Dechavassine, M. 451
 Pessac, B. 159
 Pierrepont, C.G. 89
 Pietzsch-Rohrschneider, I. 279
 Privat, A. 159
 Publicover, S.J. 373

Ray, M.B. 63
 Reed, Chr.G. 17
 Rhee, H.J., van der 11
 Rizki, R.M. 183
 Rizki, T.M. 183
 Rombout, J.H.W.M. 43
 Romijn, H.J. 199

Schubert, C. 339
 Sinowatz, F. 89
 Smith, J.L. 373
 Snow, M.H. 399
 Somló, C. 115
 Souza, W., de 115
 Stein, E.A. 315
 Stenevi, U. 289
 Stowe, S. 515
 Sundler, F. 465

Takei, Y. 175
 Tanaka, Y. 331
 Tillmann, B. 279
 Timms, B.G. 89
 Tjønneland, A. 147
 Tweedle, C.D. 191

Unnithan, G.C. 481

Verma, V. 451
 Vries-Schoumacker, H. 351
 Vullings, H.G.B. 505

Weihe, E. 43
 Welsch, U. 339, 527
 Winter, C.P.M., de 1
 Wolters, P.S. 199
 Wooding, F.B.P. 535

Yasuda, M. 69